

**Precalculus with Trigonometry: Concepts and Applications**

Correlations available at [www.keypress.com/kentucky](http://www.keypress.com/kentucky). Precalculus with Trigonometry will help you prepare your students for calculus with its coherent sequence of topics, strong concept development, and student-friendly presentation. Rich and varied problem sets will give you the tools you need to bolster your student's mathematical skills and train them to think more deeply about concepts and make interdisciplinary connections.

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Teacher Edition

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Essential Items

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Ancillary Items

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Free with Purchase items**ISBN****9781559537889**Contract Price

\$75.95

Grade

11, 12

TYPE

P1

Copyright

2007

Author

Paul Foerster

Edition

2nd

Content

270501-Pre-calculus

Readability

Lexile 1120

Accessibility

Nimas

Research

Evaluation Tool for Basal Instructional Materials  
Mathematics (2009 – 2015)

Provided by the Publisher	ISBN 9781559537889		Publisher - Key Curriculum Press	
	Precalculus with Trigonometry: Concepts and Applications			
	Type - P1	Author - Paul Foerster		
	Copyright - 2007	Edition - 2nd	Readability - Lexile 1120	
	Course - 270501-Pre-calculus		Grade(s) - 11, 12	
Teacher Edition ISBN if applicable .....				

**Overall Recommendation:**

**Recommended as BASAL**

**Overall Strengths, Weaknesses, Comments:**

if this box is not checked, the evaluators have  
chosen NOT recommend as basal

The text is a discovery based text. With the limited number of examples in students texts, teachers would need to have additional resources to provide extra examples for students. The organization of the text would also require considerable attention by the teacher as many topics are not presented in the order or arrangement of traditional precalculus texts. Also, many topics not in a traditional text are presented in this text.

NIMAC Accessibility N  
Ancillary No  
Free with Purchase Yes  
Research No

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**CRITERIA**

This basal resource ...

**A. Encompasses KY Content Standards & Grade Level Expectations Strong Evidence**

Text is designed to be used in an elective course outside the Program of Studies

**1) Includes the 5 Big Ideas of mathematics to the following extent:**

- |  |                   |
|--|-------------------|
| <b>a) Number Properties and Operations</b> | Strong Evidence   |
| <b>b) Measurement</b>                      | Moderate Evidence |
| <b>c) Geometry</b>                         | Moderate Evidence |
| <b>d) Data Analysis and Probability</b>    | Moderate Evidence |
| <b>e) Algebraic Thinking</b>               | Strong Evidence   |

**2) Addresses content-specific enduring understandings from the related Program of Studies standards.**

Strong Evidence

<b>3) Addresses content-specific skills and concepts from the related Program of Studies standards.</b>	Strong Evidence
<b>4) Content addressed is current, relevant and non-trivial</b>	Strong Evidence
<b>5) Provides opportunities for critical thinking/reasoning</b>	Strong Evidence
<b>6) Strengths, Weaknesses, Comments:</b> <ul style="list-style-type: none"> <li>Specific strengths-which areas/concepts are covered exceptionally well?</li> <li>Specific weaknesses-which areas/concepts would likely require supplementing?</li> </ul> <p><a href="#">Click here to enter text.</a></p>	

<b>B. Functionality &amp; Suitability</b>	<b>Moderate Evidence</b>
<b>1) Suitability</b>	<b>Strong Evidence</b>
<ul style="list-style-type: none"> <li>Should be suitable for use with a diverse population and is free of bias regarding race, age, ethnicity, gender, religion, social and/or geographic environment; is free of stereotyping or bias of any kind.</li> </ul>	
<b>2) Content quality</b>	<b>Strong Evidence</b>
<ul style="list-style-type: none"> <li>Free from factual errors</li> <li>Content is presented conceptually when possible—more than a mere collection of facts</li> <li>Content included accurately represents the knowledge base of the discipline</li> <li>Theories/scientific models contained represent a broad consensus of the scientific community</li> <li>Interconnections among mathematical topics</li> </ul>	
<b>3) Connections to Literacy</b>	<b>Moderate Evidence</b>
<ul style="list-style-type: none"> <li>Employs a variety of reading levels and is grade/level appropriate</li> <li>Use of multiple representations-concrete, visual/spatial, graphs, charts, etc.</li> <li>Provides opportunities for summarizing, reviewing, and reinforcing vocabulary skills and concepts at multiple levels of difficulty for a variety of learning styles.</li> <li>Student text provides opportunity to integrate reading and writing</li> <li>Uses vocabulary that is age and content appropriate</li> <li>Focuses on critical vocabulary vs. extensive lists</li> <li>Identifies key vocabulary through definitions in both text and glossary</li> <li>The text is engaging and facilitates learning</li> <li>Embedded activities enhance the understanding of the text</li> </ul> <p><i>Note: may apply to either student or teacher editions</i></p>	
<b>4) Connections to Technology</b>	<b>Moderate Evidence</b>
<ul style="list-style-type: none"> <li>Integrates technology and reflects the impact of technological advances</li> <li>Uses technology in the collection and/or manipulation of authentic data</li> <li>Embeds web links as a mathematics resource.</li> </ul>	
<b>5) Support for Diverse Learners</b>	<b>Little or No Evidence</b>

Evaluation Tool for Basal Instructional Materials  
Mathematics (2009 – 2015)

- Provides support for ESL students
- Provides support for differentiation of instruction in diverse classrooms
- Challenge for gifted and talented students
- Support for students with learning difficulties

*Note: may apply to either student or teacher editions*

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**6) Strengths, Weaknesses, Comments:**

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards.

Key vocabulary terms are identified in the text and the glossary but there is no opportunity for students to work with the vocabulary. Technology is addressed in the teacher resources but there does not appear to be an emphasis on anything other than the graphing calculator for students.

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<b>C. Supports Inquiry and Skill Development</b>	<b>Strong Evidence</b>
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**1) Promotes Inquiry, research and Application of Learning**

Strong Evidence

- Provides opportunities for inquiry and research that includes activities such as gathering information, researching resources, observing, interviewing, and evaluating information, analyzing and synthesizing data and communicating findings and conclusions, formulating authentic questions to deepen and extend mathematical reasoning.
- Requires students to use higher-level cognitive skills (analysis, synthesis, evaluation, generalizing, justifying, etc.)
- Provides activities and projects for students to deepen their knowledge and cultivate and strengthen problem-solving and decision-making skills.
- Provides opportunities for application of learned concepts.
- Uses a variety of relevant charts, graphs, diagrams, number lines, and other illustrations to invite and motivate students to engage in discussion, problem solving, and other high-order thinking skills.
- Emphasizes conceptual understandings that invite students to predict, conclude, evaluate, develop and extend ideas to support reasoning.

*Note: may apply to either teacher or student edition*

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**2) Skill Development**

Strong Evidence

- Provides opportunities to make sense of all mathematics
- Provides opportunities to recognize, create, and extend patterns.
- Provides opportunities for critical thinking and reasoning.
- Provides opportunities to justify/prove responses.
- Provides opportunities to ask deeper questions.
- Contains embedded activities (or extensions) that emphasize use of technology for problem solving

*Note: may apply to either teacher or student edition*

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**3) Strengths, Weaknesses, Comments:**

The entire text emphasizes discovery based learning there is limited drill and practice of skills.

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## D. Supports Best Practices of Teaching and Learning

Moderate Evidence

### 1) Engages Students

Moderate Evidence

- Includes content geared to the needs, interests, and abilities of all students
- Engages and motivates students using components such as real-life situations, simulations, experiments, and data gathering.
- Includes information and activities that assist students in seeing relevance of concepts (where appropriate) to their own lives and experiences
- Provides a variety of strategies, activities, and materials to enhance student learning at the appropriate learning levels
- Activities are truly congruent to the concepts addressed, not merely correlated

*Note: may apply to either teacher or student edition*

### 2) Uses Assessment to Inform Instruction

Moderate Evidence

- Includes multiple means of assessment as an integral part of instruction
- Provides evaluation measures in the teacher edition that supports differentiated learning activities
- Embedded assessments reflect a variety of Depth of Knowledge levels

*Note: may apply to either teacher or student edition*

### 3) Strengths, Weaknesses, Comments:

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards

Discovery and investigation activities are not always real world and there is not support for differentiated instruction.

## E. Has an Organization/ Format that Supports Learning and Teaching

Moderate Evidence

### 1) Organizational Quality

Moderate Evidence

- Print and/or electronic materials present minimal barriers to learners, but also add encouragement for students to stretch and make further explorations.
- Presents chapters/lessons in an organized and logical sequence
- Provides clearly stated objectives for each lesson.
- Uses text features (e.g., titles, headings, subheadings, review questions, goals, objectives, space, print, type size, color) to enhance readability.
- Makes use of various forms of media (e.g., CD's, recordings, videos, cassette tapes, computer software, web-based components, interactive software, calculators, physical and virtual manipulatives) as either student or teacher resources
- Includes clear, accurate, appropriate and clearly explained illustrations and/or graphics that reinforce content standards.
- Incorporates a glossary, footnotes, recordings, pictures, and/or tests that aid pupils and teachers in using the book effectively
- Uses grade-appropriate type size
- Included media are durable, easy to use and have technical merit
- Construction appears to be durable and able to withstand normal use

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- |   |                       |
|---|-----------------------|
| <b>2) Essential Components (beyond student and teacher text)</b>  | Little or No Evidence |
| <ul style="list-style-type: none"><li>Items identified as essential components support the learning goals and concept coverage of the basal</li></ul> |                       |
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**3) Strengths, Weaknesses, Comments:**

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards.

The text contains no review of algebra and few examples for students within the sections. The order of topics presented and the topics chosen for emphasis are not reflective of traditional precalculus texts. The number of topics presented in this text would be near impossible to cover in a single class. Given the vast amount of content topics presented the teacher would have to know the expectations of a precalculus class well enough to be appropriately selective.

**F. Has available Ancillary/ Gratis Materials**

*Note: The decision whether to recommend or not recommend this resource as a basal should not be influenced by Section F*

**Little or No Evidence**

**1) Ancillary/Gratis Materials**

- Coordinates teacher resources easily with student material (e.g., accompaniments included, student pages shown, instructional technology indicated).
- Are well-organized and easy to use
- Provide substantive learning opportunities and are congruent with student learning goals
- Provide opportunities for high-level thinking, assessment, and/or problem solving
- Provides opportunities for intervention.

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**2) Strengths, Weaknesses, Comments:**

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards.

No material available.

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